TABLE 2.—*Average hourly frequency of precipitation at Nashville, Tenn. (percentage of possible), 1905–1921, inclusive.*

Months.	A. M.												P. M.												Sum.
	1	2	3	4	5	6	7	8	9	10	11	Noon.	1	2	3	4	5	6	7	8	9	10	11	Mid't.	
January	8.7	8.9	10.4	9.9	10.4	8.7	7.8	8.5	10.1	9.3	8.7	9.5	8.9	9.5	8.7	10.4	11.0	10.2	9.9	9.7	9.3	7.8	8.5	8.9	9.3
February	8.5	9.0	9.4	9.4	9.4	8.3	8.3	7.7	7.3	8.3	9.0	9.4	7.5	8.1	7.7	7.5	6.9	7.5	7.1	8.1	7.3	7.3	6.7	7.1	8.0
March	9.3	8.7	9.9	8.9	6.5	8.7	8.4	8.2	7.2	8.4	8.2	8.2	7.4	9.7	9.7	8.7	8.4	6.5	6.8	7.2	6.8	7.8	8.2	8.4	8.2
April	7.6	8.4	7.3	7.6	6.9	8.6	8.8	6.1	5.9	6.5	3.9	5.1	5.7	4.5	7.1	6.5	5.5	4.5	6.9	5.3	4.3	6.9	7.3	7.6	6.4
May	4.7	5.1	6.6	6.5	6.3	6.5	6.5	5.1	3.2	3.8	3.6	3.6	5.9	4.4	4.9	8.5	7.8	7.8	8.2	7.2	5.3	5.1	4.0	4.6	5.6
June	3.9	3.7	4.3	4.9	5.3	4.7	4.7	4.1	2.7	3.1	3.3	6.5	6.5	5.1	5.7	5.9	4.7	5.5	6.1	4.7	3.5	2.5	2.7	3.9	4.5
July	2.7	2.8	3.2	3.6	4.0	3.8	4.7	4.7	4.7	3.4	4.9	5.1	4.6	5.3	6.5	6.5	6.1	4.6	4.6	4.4	3.6	3.6	2.8	4.0	4.3
August	2.8	3.8	4.6	4.6	5.3	5.9	4.6	3.6	4.4	4.0	4.6	5.5	4.7	5.3	5.5	5.9	4.6	5.5	5.3	5.9	4.2	3.6	2.7	1.5	4.5
September	3.3	3.5	2.7	3.7	4.5	4.3	5.7	3.1	3.9	3.7	4.7	3.7	5.1	5.5	5.3	4.1	5.3	5.1	4.3	3.3	3.5	3.9	3.1	3.5	4.1
October	3.0	3.4	4.4	4.6	4.7	6.3	6.5	6.1	6.1	5.3	5.9	4.7	4.9	5.3	6.1	6.1	5.5	4.7	5.3	4.7	4.9	4.0	3.4	4.2	5.0
November	6.7	5.9	5.9	6.7	7.8	6.3	6.7	6.5	6.5	5.7	6.3	6.1	5.1	5.1	4.7	4.7	5.1	4.1	4.5	3.3	3.5	4.3	6.3	5.9	5.6
December	9.5	9.3	10.4	9.3	9.7	9.1	9.3	8.9	9.7	9.5	7.6	8.4	8.5	7.6	7.4	8.5	9.9	10.1	8.9	8.7	9.9	8.9	10.4	10.2	9.2
Sums	70.7	72.5	79.1	79.7	80.8	81.2	82.0	72.6	71.7	71.0	70.7	75.8	74.8	75.4	79.3	83.3	80.8	76.1	77.9	72.5	66.1	65.7	68.1	69.8	74.7
Means	5.9	6.0	6.6	6.6	6.7	6.8	6.8	6.0	6.0	5.9	5.9	6.3	6.2	6.3	6.6	6.9	6.7	6.3	6.5	6.0	5.5	5.5	5.5	5.8	6.2

TORNADOES OF APRIL, 1922.

DISCUSSION OF GENERAL CONDITIONS.

ALFRED J. HENRY.

[Weather Bureau, Washington, C. D., May 25, 1922.]

Three outbreaks of tornadoes occurred during the month, the first on the early morning of the 8th in north central Texas, extending in a northeast-southwest direction from Runnels County, Tex., into Comanche County, Okla., a distance of about 200 miles.

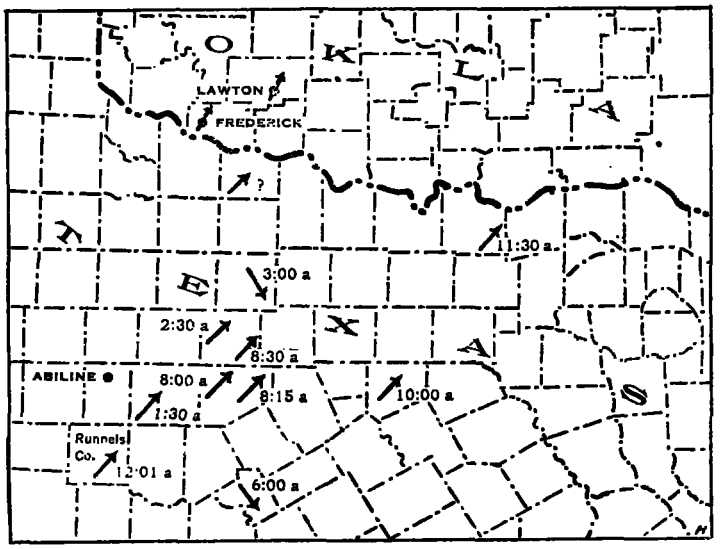

FIG. 1.—Region of tornado occurrence in Texas and Oklahoma, Apr. 8, 1922.

The exceptional character of this outbreak was the fact that practically all of the storms developed after midnight of the 7th. In the absence of detailed field data it is impossible to determine whether there was one general storm of long duration or a group of local manifestations of tornadic activity in the path of the main cyclone. The latter, after 24 hours' stagnation over Texas, moved rapidly during the 24 hours ending 8 a. m., 9th, to the upper Mississippi Valley, where it was centered as a circular storm of wide extent and low central pressure—29.00 inches. Another rather unusual circumstance in connection with this cyclonic storm was the fact that it was almost immediately followed by another, likewise of low barometer level at its center—viz. 29.30 inches at Dodge City, Kans., on the morning of the 10th.

This storm or cyclonic depression gave rise to the second outbreak of tornadic storms in southwestern Missouri, as described by Meteorologist W. B. Hare in the following pages.

The third and probably the most violent tornadoes of the month are described by Messrs. Root and Shipman. The pressure distribution in connection with these tornadoes was of the trough type with centers of minimum pressure in both the northern and the southern ends of the trough, respectively.

At 8 a. m. of the 17th there was a well-marked wind shift line separating the warm southerly winds on the east side of the axis of the trough from the relatively cooler north winds on the west side. In the succeeding 24 hours cool northerly winds swept over the region of warm southerly winds in which the tornadoes had their origin.

In all 42 persons were killed and 237 injured in these storms. The property loss was estimated as $968,150.

The foregoing does not include loss of life or property in Ohio, as reported by Meteorologist W. H. Alexander. See page 187.

IN TEXAS.

B. BUNNEMEYER, Meteorologist.

[Weather Bureau, Houston, Tex.]

Table 1 gives a summary of the tornadoes that occurred in Texas during April so far as reported to the section center. The property loss amounted to $232,150, and 14, persons were killed and 108 more or less seriously injured by these storms. All but one of the 11 tornadoes occurred on the 8th.

Special attention is invited to the hours of occurrence which varied between 12:01 a. m. and 11:30 a. m. The length of their paths could not be ascertained, but it is probable that in one or two instances the same tornado passed into an adjoining county. Figure 1 shows the approximate paths followed by the tornadoes. The hour of occurrence has been added to show possible connection between some of the tornadoes charted separately.

TABLE 1.—*Tornadoes in Texas during April, 1922.*

Locality.	County.	Date and hour of occurrence.	Direction of movement.	Width of paths (feet).	Property loss.	Number persons injured.	Number persons killed.
Goldthwaite	Mills	4th, 6.00 a. m.	nw. to se.	20	$8,150	0	0
Rowena	Runnels	8th, 12.01 a. m.	sw to ne.	.....	55,000	52	7
Cisco	Eastland	8th, 8.00 a. m.	sw to ne.	33	25,000	3	0
Ranger	Eastland	8th, 8.15 a. m.	sw. to ne.	440	6,000	2	0
Oplin	Callahan	8th, 1.30 a. m.	sw. to ne.	.....	15,000	30	5
Caddo	Stephens	8th, 8.30 a. m.	sw. to ne.	100	50,000	6	0
Breckenridge	Stephens	8th, 2.30 a. m.	sw. to ne.	.....	2,000	2	0
Graham	Young	8th, 3.00 a. m.	nw. to se.	120	10,000	1	0
Cleburne	Johnson	8th, 10.00 a. m.	sw. to ne.	440	25,000	1	1
Electra	Wichita	8th, ...	sw. to ne.	100	25,000	10	1
Whitewright	Grayson	8th, 11.30 a. m.	sw. to ne.	500	11,000	1	0
Total					232,150	108	14